

AMENDMENT UNDER 37 C.F.R. § 1.111

U.S. Appln. No. 09/826,308

Attorney Docket No.: Q63977

REMARKS

Claims 1-19 are all the claims pending in the application. Claims 1-17 presently stand rejected. By this Amendment, Applicant editorially amends claims 1-3, 5-11, 14, and 16. The amendments to claims 1-3, 5-11, 14, and 16 were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents. By this Amendment, Applicant also adds claims 18 and 19. Claims 18 and 19 are clearly supported throughout the specification, *e.g.*, ¶¶ 47-51.

Also, Applicant amends the specification and Fig. 6 to cure minor typographical errors. No new matter is being added.

Preliminary Matters

The Examiner's initialing of the references listed on Form PTO/SB/08 A & B submitted with the Information Disclosure Statements filed on August 10, 2001 and June 12, 2003, is gratefully noted.

Also, Applicant thanks the Examiner for indicating approval of the drawings filed on August 10, 2001.

Finally, Applicant thanks the Examiner for acknowledging the claims to foreign priority and indicating receipt of the certified copies of the priority documents filed on August 10, 2001.

Claim Rejections

Claims 1-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 10143339 to Sato et al. (hereinafter "Sato"), in view of U.S. Patent No. 6,665,082 to Takeoka et al. (hereinafter "Takeoka"). Applicant respectfully traverses in view of the following comments.

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Of the rejected claims, claims 1, 2, 5, 6, 7, 9-11, 13, 14, and 16 are independent.

Independent claim 1, among a number of unique features recited: “a process for dividing printing data, which controls printing of the printer, into plural fragments of data, adding information for discriminating the fragments of data to the respective fragments of data, and recording said plurality of fragments of data with the respective added information as a plurality of files; a process for creating data for each of said plurality of files, said data comprises information for specifying a respective file from said plurality of files, and recording said specifying information as a print spooling file separately from said respective file.”

The Examiner alleges that claim 1 is directed to a program for enabling a computer to perform a process for reading and outputting printing data and is obvious in view of Sato and Takeoka. The Examiner alleges that Sato discloses a process for creating data, which include information for specifying said file, and recording said specifying information as a print spooling file separately from said file (*see* page 2 of the Office Action). In addition, the Examiner acknowledges that Sato does not teach or suggest adding information for discriminating the fragments of data to the respective fragments of data (*see* page 3 of the Office Action). The Examiner, however, alleges that Takeoka cures the deficient teaching of Sato. Applicant has carefully studied the combined teachings of Sato and Takeoka, which lack having the specifying information be recorded separately from the file and adding information for discriminating the fragments of data.

Sato discloses a network print system which shortens the time needed for printing even when an abnormality occurs in communication between a client and a server (*see* Abstract). In particular, Sato discloses a client 10 that requests printing and a server 20 (¶ 24). The client 10

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has the printer 14 locally connected with the spool file 11 which saves the divided print data of the specified quantity. The spooler 12 transmits the printing data stream sent by activation program 1 to the reception server 20. The spool file reclosing section 13 supplies the spool file 11 to the spooler 12 of the client 10. The spooler 12 includes the spool file creating section 15, the spool file cutout 16. The spool file creation section 15 creates serially the spool file 11, which accumulates the print data of the specified quantity. The spool file cutout 16 is formed as a print-data deletion means that deletes the spool file once it has been transferred to the server without any errors occurring (§ 25).

Sato, however, only discloses that the print data is accumulated until a predetermined quantity. Sato does not teach or suggest having the information that specifies the print file being stored separately from the print file. That is, in Sato, there is no separate spooling file that stores information that identifies a respective fragment of print data. Moreover, Sato fails to teach or suggest adding information for discriminating the fragments of data to the spooling file.

Takeoka discloses a printer system to reduce the necessary storage capacity of the internal memory of a printer, a printing start command is transmitted from a printer controller to a printer by asynchronous transfer before the transmission of image data. Isochronous transfer of image data to be printed in packet units starts upon elapse of a fixed period of time following transmission of the printing start command. Image data thenceforth is transmitted from the printer controller to the printer successively by isochronous transfer at a fixed period. Since the image data is transmitted from the printer controller to the printer at the fixed period, printing can be performed at a constant speed without requiring that the printer be provided with an image memory for storing image data representing one frame of an image. In a case where a

transfer request command is supplied from the printer to the printer controller, the image data is transmitted from the printer controller to the printer in response to the transfer request command (*see* Abstract).

Specifically, Takeoka discloses that when the transfer is isochronous, the format of an isochronous data packet where image data is transmitted includes a) data length indicating the length of the data, b) a channel number assigned to a command or image data, c) a t-code indicative of whether the data transfer is asynchronous or isochronous, d) Sy, which indicates a synchronizing bit, e) a header CRC, which is an error detection code for detection of an error in the data from the data length to the synchronizing bit Sy, f) a command or image data, and g) data CRC, which is an error detection code for detection of an error in the command or image data (col. 6, line 56 to col. 7, line 4 and col. 7, lines 42 to 57).

However, in Takeoka, there is no teaching or suggestion of adding information for discriminating between fragments of data. That is, in Takeoka, the parameters relate to the transmission of data and not for distinguishing between various print data fragments. For example, in Takeoka, there is no teaching or suggestion of a packet code portion that would indicate a code for discriminating the data type of the packet data or a code for the type of packet. Moreover, Takeoka does not teach or suggest having a separate file that would identify the file that has print data.

Finally, it is respectfully submitted that one of ordinary skill in the art would not have been motivated to combine Sato and Takeoka in the manner suggested by the Examiner. A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided

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only by the prior art references and the then-accepted wisdom in the field. *See In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (citing *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one “to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.” *Kotzab*, 55 USPQ2d at 1316 (quoting *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998)). Thus, every element of a claimed invention may often be found in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); and *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). ***Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be “clear and particular.”*** *Winner International Royalty Corporation v. Ching-Rong Wang*, 53 USPQ2d 1580, 1586-87 (Fed. Cir. 2000) (citations omitted).

The Examiner alleges that one of ordinary skill in the art would have been motivated to combine the references because a) dividing print data shortens print time, b) dividing print data

results in smaller buffer in the printer and thus, lowers the cost of the printer, and c) allow the system to “easily recognize its contents and to increase operating efficiency (*see* page 3 of the Office Action). It is respectfully pointed out, however, that Sato discloses that the print data created by the client is divided for a specified quantity. This specified quantity creates a spool file (*see* ¶ 24 of Sato). Accordingly, if, in Sato, the print data is already divided, then the reasons “a” and “b” as detailed above are inapplicable. That is, if Sato already divides the print data, then the motivation to combine Takeoka cannot be “so as to divide the print data”.

Moreover, with respect to reason “c”, in Sato and Takeoka, there is no teaching or suggestion of easily recognizing contents of the data to increase operating efficiency. Sato does not teach or suggest additional information, as acknowledged by the Examiner. Takeoka only discloses including in the packet information related to the transmission of data and not to recognition of the data contents. Accordingly, this third reason is also improper.

Indeed, one of ordinary skill in the art would not have been motivated to combine the references. Sato relates to a network printing system having a client and a server where the time needed for the printing is shortened even when an abnormality occurs, whereas Takeoka relates to image printing utilizing IEEE Standard 1394, *i.e.*, asynchronous and isochronous printing. One of ordinary skill in the art, confronted with the problem of shortening the time for printing when an abnormality occurs would not have turned to Takeoka’s method of asynchronous and isochronous printing.

Therefore, “a process for dividing printing data, which controls printing of the printer, into plural fragments of data, adding information for discriminating the fragments of data to the respective fragments of data, and recording said plurality of fragments of data with the respective

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added information as a plurality of files; a process for creating data for each of said plurality of files, said data comprises information for specifying a respective file from said plurality of files, and recording said specifying information as a print spooling file separately from said respective file,” as set forth in claim 1 is not taught or suggested by the combined teachings of Sato and Takeoka, which lack having a file comprising of fragments of data including additional information for discriminating the fragment from other fragments and having data identifying a specific file, which is stored separately from the specific file. For at least these exemplary reasons, claim 1 is patentable over the combined teachings of Sato and Takeoka. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 1.

Independent claims 2, 5, and 6 include similar features to the features argued above with respect to claim 1. For at least analogous reasons, claims 2, 5, and 6 are patentable over the combined teachings of Sato and Takeoka. Claims 3 and 4 are patentable at least by virtue of their dependency on claim 2.

Moreover, claim 7 recites: “a determining process for determining whether or not a print spooling file includes information for specifying one file among plural files that include printing data, said information is stored separately from the plural files; a process for reading said print spooling file to refer to information for specifying said file when a determination is made that the print spooling file includes the information for specifying the file.” Applicant respectfully submits that the combined teachings of Sato and Takeoka do not teach or suggest the unique features of claim 7.

As explained in greater detail above, the combined teachings of Sato and Takeoka do not teach or suggest having information specifying one of a number of print files, wherein the

information is stored separately from the print files. Moreover, Sato and Takeoka do not teach or suggest determining whether the spool file has this information and reading the spool file when it is determined that this spool file has this information. For at least these exemplary reasons, claim 7 is patentable over Sato in view of Takeoka. Therefore, it is appropriate and necessary for the Examiner to withdraw this rejection of claim 7. Claim 8 is patentable at least by virtue of its dependency on claim 7.

In addition, dependent claim 8 recites: “a process for reading the specified file to create and record a file comprising printing data in a unit of page.” The Examiner alleges that Sato teaches this unique feature of claim 8 (*see* page 6 of the Office Action). Sato, however, only discloses dividing print data into a specified quantity (§§ 25-28). Sato fails to teach or suggest that this specified amount is a unit of a page. Takeoka does not cure the deficient teachings of Sato. For at least this additional reason, claim 8 is patentable over the combined teachings of Sato and Takeoka.

Independent claims 9 and 10 include similar features to the features argued above with respect to claim 7. For at least analogous reasons, claims 9 and 10 are patentable over the combined teachings of Sato and Takeoka.

Claim 11 recites: “a process for creating printing data, which controls a printer, in accordance with a printing instruction from a computer operator; a process for determining whether or not a print processor can control transfer to a printer in accordance with printing data created by the computer; a process for creating a file recording a command for controlling the printer when it is determined that the print processor can control transfer to the printer in accordance with printing data created by the computer; and a process for creating data, which

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include information for specifying said file, separately from said file.” The Examiner alleges that claim 11 recites similar limitations to claim 2 and is rejected for the same reasons (*see* page 7 of the Office Action).

To begin, claim 11 recites features similar to the features argued above with respect to claim 1, namely information specifying a file, which is stored separately from the file. Accordingly, analogous reasons to the reasons provided with respect to claim 1 apply with equal force here. Therefore, for at least analogous reasons to the reasons provided above with respect to claim 1, claim 11 is patentable over the combined teachings of Sato and Takeoka.

In addition, claim 11 recites: “a file recording a command for controlling the printer when it is determined that the print processor can control transfer to the printer in accordance with printing data created by the computer.” In Sato, the print data is the actual data being printed, whereas claim 11 requires a file recording a command for controlling the printer. In Takeoka, only packets for transmitting the commands between the print controller and a printer are disclosed. In Takeoka, there is no teaching or suggestion of a file with print commands. As a result, it is respectfully submitted that the combined teachings of Sato and Takeoka do not teach or suggest having a file recording a command for controlling the printer. Moreover, the combined teachings of Sato and Takeoka do not teach or suggest recording the command when a determination is made that the print processor can control the transfer to the printer. For at least these additional exemplary reasons, claim 11 is patentable over the combined teachings of Sato and Takeoka. Claim 12 is patentable at least by virtue of its dependency on claim 11.

Claim 13 recites features similar to the features argued above with respect to claim 1, namely “means for creating data, which include information for specifying said file, separately

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from said file.” Accordingly, analogous reasons to the reasons provided with respect to claim 1 apply with equal force here. Therefore, claim 13 is patentable over the combined teachings of Sato and Takeoka.

Claim 14 recites features similar to the features argued above with respect to claim 1. Accordingly, analogous reasons to the reasons provided with respect to claim 1 apply with equal force here. Therefore, for at least similar reasons, claim 14 is patentable over the combined teachings of Sato and Takeoka. Moreover, claim 14 requires having a first file that includes printing data and a second file that includes commands for controlling the printing. The Examiner acknowledges that Sato does not teach or suggest this unique features of claim 14 (*see* page 8 of the Office Action). The Examiner, however, alleges that Takeoka cures the deficient teachings of Sato by its disclosure of a synchronization bit Sy that can be set to various states. Applicant respectfully disagrees.

Takeoka’s synchronization bit Sy can, for example, become “3” in order to express the printing start command or when image data representing the initial portion of an image is transmitted, the synchronizing bit Sy can become “1” so as to express this fact (cols. 11 and 12). It is respectfully noted, however, that the synchronization bit is stored together with the print data and not as a separate file (the second file). In addition, Takeoka discloses having the null data packets that only carry the command data but these are packets being transmitted and not files being stored.

In addition, there is no teaching or suggest that during the reading of print data file, it is determined whether the command packets have been updated. In fact, since the commands are placed in the packets and not files, the packets are not updated but simply generated and

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transmitted to the printer. In other words, once the command packet is created, there is no update. For at least these additional exemplary reasons claim 14 is patentable over the combined teachings of Sato and Takeoka. Claim 15 is patentable at least by virtue of its dependency on claim 14.

Claims 15 and 16 recite features similar to the features argued above with respect to claim 14. Accordingly, analogous reasons to the reasons provided with respect to claim 14 apply with equal force here. Therefore, for at least similar reasons, claims 15 and 16 are patentable over the combined teachings of Sato and Takeoka.

Claim 17 is patentable at least by virtue of its dependency on any one of claims 1, 2, 3, 4, 7, 8, 11, 12, 14, and 15.

New Claims

In order to provide more varied protection, Applicant adds claims 18 and 19. Claim 18 is patentable at least by virtue of its recitation of “wherein the print processor retrieves in a predetermined order each of a plurality of sub-files and each of a plurality of print commands based on the spool file and transmits to the printer the retrieved sub-file and print command while reading next sub-file name from the spool file.” Claim 19 is patentable at least by virtue of its dependency on claim 18.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

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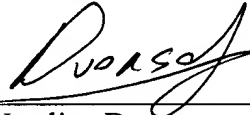
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AMENDMENTS TO THE DRAWINGS

Applicant is submitting herewith one (1) sheet of annotated drawings, which include
FIG. 6.

FIG. 6 is amended to recite: “P2” as opposed to the second occurrences of “P1”.

Attachment: Annotated Sheet

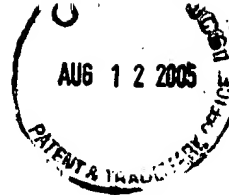


FIG.6

